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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/062,688

01/31/2002

Marc-David Cohen

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06/13/2006

STEPHEN D. SCANLON
JONES DAY
901 LAKESIDE AVENUE
CLEVELAND, OH 44114

EXAMINER

KRISCIUNAS, LINDA MARY

ART UNIT

PAPER NUMBER

3623

DATE MAILED: 06/13/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/062,688

Applicant(s)

COHEN ET AL.

Examiner

Linda Krisciunas

Art Unit

3623

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 May 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-32 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-32 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date May 25, 2006.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application (PTO-152)
- ☒ Other: 1.105.

Application/Control Number: 10/062,688

Art Unit: 3623

Request for Information Under 37 CFR 1.105

Applicant and the assignee of this application are required under 37 CFR 1.105 to provide the following information that the examiner has determined is reasonably necessary to the examination of this application.

The fee and certification requirements of 37 C.F.R. § 1.97 are waived for those documents submitted in reply to this requirement. This waiver extends only to those documents within the scope of this requirement under 37 C.F.R. § 1.105 that are included in the applicant's first complete communication responding to this requirement. Any supplemental replies subsequent to the first communication responding to this requirement and any information disclosures beyond the scope of this requirement under 37 C.F.R. § 1.105 are subject to the fee and certification requirements of 37 C.F.R. § 1.97.

The applicant is reminded that the reply to this requirement must be made with candor and good faith under 37 CFR 1.56. Where the applicant does not have or cannot readily obtain an item of required information, a statement that the item is unknown or cannot be readily obtained will be accepted as a complete response to the requirement for that item.

This requirement is an attachment of the enclosed Office action. A complete response to the enclosed Office action must include a complete response to this requirement. The time period for reply to this requirement coincides with the time period for reply to the enclosed Office action, which is 3 months.

Application/Control Number: 10/062,688

Art Unit: 3623

In response to this requirement, please provide the citation and a copy of each publication which any of the applicants authored or co-authored and which describe the disclosed subject matter of Non Patent Literature found in "Simulation Optimization Using Soft Computing" by Andres Medaglia, PhD Dissertation at North Carolina State University in the Department of Operations Research, referred to on page 40 as "The SAS System" for research on a multicriteria approach to solving for optimal scores as depicted on page 56 and 65. This system appears similar in scope to the claimed invention which teaches an optimization function for scoring or evaluating vendors. Please provide documentation as to the abilities of "The SAS System" prior to January 31, 2002 so the Examiner can fully understand the capabilities and difference between the two items. In addition, should the inventions be one in the same, the dissertation was disclosed more than one year prior to the applicant's submission for a patent which would preclude the applicant from a patent under 35 USC 102b due to an on sale bar.

The information is required to identify products and services embodying the disclosed subject matter of application 10/062688 and identify the properties of similar products and services found in the prior art.

In response to this requirement, please provide the names of any products or services that have incorporated the disclosed prior art in application 10/062688.



TARIQ R. HAFIZ
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3600

DETAILED ACTION

1. The following is a Non-Final Office Action in response to the amendment filed May 25, 2006. Claims 1-32 are pending. No amendments have been made.

This Office action has an attached requirement for information under 37 C.F.R. § 1.105. A complete response to this Office action must include a complete response to the attached requirement for information. The time period for reply to the attached requirement coincides with the time period for reply to this Office action.

Response to Arguments

2. Applicant's arguments with respect to claims 1-32 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-9, 16-17, 20-23 and 30 are rejected under 35 U.S.C. 102(b) as being anticipated by "Evaluating Suppliers of Complex Systems: A Multiple Criteria Approach" by Cook et al, The Journal of the Operational Research Society, November 1992; hereinafter referred to as "Cook".

As per claims 1 and 20, Cook teaches receiving data about performance measures of a first performer (page 1055, paragraph 4 where the system appraises

Art Unit: 3623

attributes of vendors or performers to arrive at a ranking of vendors which constitutes performance measures.); receiving business logic rules related to at least one of the performance measures (page 1059, paragraph 5 where the decision making units represents the rules and they control the measures provided via the formulas); constructing a mathematical optimization program that includes an overall performance rating as an objective function (page 1059, paragraph 5 where the system contains formulas that provide and best or highest rating subject to certain constraints on the weights, which represents an optimization function with the end result being the ranking value (R).); and using the mathematical optimization program to optimize the overall performance rating of the first performer by adjusting a set of weights constrained by the business logic rules (page 1059, paragraph 7, where the maximizing parameter E is directed toward finding a set of weights which provide for a maximum, where the optimization formula for determining the weights would constitute the rule(s) used); wherein the overall performance rating is used to assess the performance of the first performer (page 1055, paragraph 4: "ranking of the vendors" since a rank positioning is determined for all vendors, it inherently provides a rating for the "first performer" as well as any subsequent ones.).

As per claims 2, Cook teaches determining absolute weight relationships of the performance measures based upon the business logic rules; and using the mathematical optimization program to optimize the overall performance rating of the first performer by adjusting the determined absolute weight ranges constrained by the business logic rules (page 1056, paragraph 1, where the system derives a weighted

total rating for each vendor and utilizes an optimization procedure for deriving a set of importance weights for criteria and rank positions for each vendor. The formula used in the optimization process functions as the rule(s).).

As per claim 3, Cook teaches using the linear program model to optimize the overall performance rating of the first performer by adjusting the determined relative weight relationships constrained by the business logic rules (page 1056, paragraph 1, where the system derives a weighted total rating for each vendor and utilizes an optimization procedure for deriving a set of importance weights for criteria and rank positions. The formula used in the optimization functions as the rule); and determining relative weight ranges of the performance measures based upon the business logic rules and the absolute weight ranges (page 1059, paragraph 7, where the maximizing parameter E is directed toward finding a set of weights which provide for a maximum, where the optimization formula for determining the weights would constitute the rule used. See also page 1060, paragraph 2 which teaches about using relative weights and specific or absolute weights.).

As per claims 4-5 and 21-22, Cook teaches optimality in the overall performance rating for the first performer constrained by the business logic rules (p 1059, paragraph 5, where it teaches the highest or best rating which constitutes optimality).

As per claim 6, Cook teaches that it is known to normalize the performance measures data such that the performance measures data have substantially similar ranges (page 1057, paragraph 2, where the data ranges were selected to be from

Art Unit: 3623

values of 1 to 5 which performs a normalizing function of the values so that the range of data values used for each vendor are within comparable ranges).

As per claims 7-8, 16 and 30 they recite substantially the same limitations as claim 1 and are therefore subject to the same art rejection(s). The optimization formula of Cook is run for each vendor, so the limitation of a second performer does not impact the art rejection. In addition, the optimization of producing the highest possible rating is performed for each vendor and thus would vary from the first vendor assuming they will not have all the same scores. Cook teaches the second performer's overall performance rating is used to assess performance of the second performer with respect to performance of the first performer (page 1059, paragraph 2, where the vendors or suppliers are ranked relative to each other).

As per claims 9 and 23, Cook teaches the preselected set of performers includes suppliers that are to be assessed (page 1055, paragraph 4, where vendors or suppliers are the performers).

As per claim 17, Cook teaches performance measures data interrelates a performer with at least two performance measurements (page 1057, Table 1 where there are 40 criteria that each performer or vendor is rated on.).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 10-11 and 24-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over “Evaluating Suppliers of Complex Systems: A Multiple Criteria Approach” by Cook et al, The Journal of the Operational Research Society, November 1992; hereinafter referred to as “Cook”.

As per claim 10-11 and 24-25, Cook does not explicitly teach the preselected set of performers includes services and products that are to be assessed. Official notice is taken that it is old and well known that vendors provide goods and/or services. Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the vendors of Cook such that they explicitly provide services and products to provide a more comprehensive listing of vendors and their respective offerings.

7. Claims 12-15 and 26-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over “Evaluating Suppliers of Complex Systems: A Multiple Criteria Approach” by Cook et al, The Journal of the Operational Research Society, November 1992; hereinafter referred to as “Cook” in view of “Solver setting for optimal solutions” by Ananda Samudhram, New Straits Times, November 22, 1999; hereinafter referred to as “Samudhram”.

As per claims 12-13 and 26-27, Cook teaches a linear programming module (page 1059, paragraph 7). Cook does not explicitly teach the mathematical optimization program is a non-linear program module. Samudhram teaches that it is known that optimization programs utilize linear and non-linear models (page 2, paragraph 2, where the Solver system of Excel allows utilization of its optimization algorithms with both

linear and non-linear models). Samudhram is an analogous art as it also teaches about optimization algorithms. Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the optimization algorithm of Cook to be used with linear and non-linear models to provide a more user-friendly and comprehensive system that could additionally be more marketable as it would apply to more problem areas.

As per claims 14-15 and 28-29, Cook teaches converting the business logic rules into constraints for use by the linear programming module in optimizing the overall performance rating of the first performer (page 1059, paragraph 7 where the constraints restrict the aggregate rating for each vendor not to exceed 100%. In addition, the constraints specify the extent of discrimination between criteria and restrict the importance attached to rank positions. Lastly, the constraints control the amount the weights vary relative to each other, where the formulas utilized function as the rule(s) and the constraints are part of the formulas.), wherein the overall performance rating is used to assess the performance of the first performer (page 1055, paragraph 4: "ranking of the vendors" since a rank positioning is determined for all vendors, it inherently provides a rating for the "first performer" as well as any subsequent ones).

8. Claims 18-19 and 31-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over "Evaluating Suppliers of Complex Systems: A Multiple Criteria Approach" by Cook et al, The Journal of the Operational Research Society, November 1992; hereinafter referred to as "Cook" in view of "Supplier Selection and Management System Considering Relationships in Supply Chain Management" by Lee et al, IEEE

Transactions on Engineering Management, August 2001; hereinafter referred to as "Lee".

As per claims 18 and 31, Cook teaches receiving performance measures data for a plurality of performers (page 1055, paragraph 4 where the system appraises attributes of vendors or performers to arrive at a ranking of vendors which constitutes performance measures.); using the mathematical optimization program to optimize the overall performance rating for each of the performers (page 1056, paragraph 1, where the system derives a weighted total rating for each vendor and utilizes an optimization procedure for deriving a set of importance weights for criteria and rank positions for each vendor and page 1059, paragraph 5 where the system contains formulas that provide and best or highest rating subject to certain constraints on the weights, which represents an optimization function with the end result being the ranking value (R).), Cook does not explicitly teach forming tiers. Lee teaches forming tiers by grouping the performers based upon their respective overall performance ratings (See page 311, Figure 3 and paragraph C where a qualitative rating scale is used, ie outstanding, above average, average, below average or unsatisfactory. Where these ratings are tiered as per Figure 3.). Lee is an analogous art as it also teaches about rating the performance of vendors. Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the rating system of Cook with the tiering feature of Lee to provide a more user friendly system that is efficiently organized according to commonalities such that the data is easier to assess.

As per claims 19 and 32, Cook does not explicitly teach statistical analysis. Lee teaches that it is known to provide ratings of the performers to a statistical analysis program means; and forming non-uniform tiers by grouping the performers based upon performance distribution analysis performed by the statistical analysis program means (See page 311, Figure 3 and paragraph C where a qualitative rating scale is used, ie outstanding, above average, average, below average or unsatisfactory. Where these ratings are tiered as per Figure 3, with some tiers having 6 levels and some having 5 levels and depending upon where the data falls, each level will have a varying number of values in it. The fact that the values are measured according to an average, ie above and below average etc, implies that an average value was computed which is a statistical function. Additional statistical analysis is discussed on page 315, section B.).

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The following art also teaches about vendor evaluation and optimization: Haq et al (US 6,275,812), "Advances in Mathematical Programming and Optimization in the SAS System" by Kearney, SAS Institute, SUGI Proceedings 1999; "SAS/OR Optimization Procedures, with Applications to the Oil Industry" by Cohen et al, SAS Institute, SUGI Proceedings 1994; "Supply chain design and analysis: models and methods" by Beamon, International Journal of Production Economics, 1998; "An effective supplier development methodology for enhancing supply chain performance" by Lee et al, ICMIT 2000; "Perfect and Open Ratings Form Alliance to Provide Critical

Art Unit: 3623

Supplier Performance Ratings to Private Exchanges and Net Markets", Business Wire, October 30, 2000; and "I2 Technologies: i2 releases i2 five.two—the complete platform for dynamic value chain management; flexible, intuitive, powerful solutions designed to help companies gain efficiencies and drive revenue", M2 Presswire, October 25, 2001.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Linda Krisciunas whose telephone number is 571-272-6931. The examiner can normally be reached on Monday through Friday, 6:30 am to 3:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tariq Hafiz can be reached on 571-272-6729. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

LMK

LMK
June 8, 2006


TARIQ R. HAFIZ
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3900